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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			PIZIALI, JEFFREY J	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/709,506	Applicant(s) CHIEN ET AL.	
	Examiner Jeff Piziali	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement (e.g., see Paragraph 7, Line 8). 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

3. The disclosure is objected to because of the following informalities:

The term, "*personal digital assistants (PDA)*" should be changed, for example to, "*personal digital assistants (PDAs)*" (see Paragraph 4, Line 4).

The phrase, "*LCD televisions are gaining in popularity as a substitute*" should be changed, for example to, "*LCD televisions are gaining in popularity as substitutes*" (see Paragraph 4, Line 6).

The phrase, "***larger the pixel data value, higher the gray level value***" should be changed, for example to, "***the larger the pixel data value, the higher the gray level value***" (see Paragraph 6, Lines 11-12).

Appropriate correction is required.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "38" has been used to designate both a "***switching device***" in Figure 3 and a "***memory controller***" in Figure 9 (see also Paragraph 29, Line 16). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the figures.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 13-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "***a plurality of scan lines***" (in line 3) and "***a corresponding scan line***" (in line 6). It would be unclear to one having ordinary skill in the art whether the "***corresponding scan line***" is one of the earlier claimed "***plurality of scan lines***"; or rather whether the "***corresponding scan line***" is separate and distinct from the earlier claimed "***plurality of scan lines***."

An omitted structural cooperative relationship results from the subject matter: "***a plurality of data lines***" (in line 4); "***a corresponding data line***" (in line 7); and "***a data line***" (in line 17). It would be unclear to one having ordinary skill in the art whether the "***corresponding***

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"data line" is one of the earlier claimed *"plurality of data lines"*; or rather whether the *"corresponding data line"* is separate and distinct from the earlier claimed *"plurality of data lines."* Additionally, It would be unclear to one having ordinary skill in the art whether the *"data line"* is one of the earlier claimed *"plurality of data lines"* and/or the *"corresponding data line"*; or rather whether the *"data line"* is separate and distinct from the earlier claimed *"plurality of data lines"* and/or the *"corresponding data line."*

An omitted structural cooperative relationship results from the subject matter: *"a plurality of pixels"* (in line 5) and *"the pixel"* (in line 16). It would be unclear to one having ordinary skill in the art whether the *"pixel"* is one of the earlier claimed *"plurality of pixels"*; or rather whether the *"pixel"* is separate and distinct from the earlier claimed *"plurality of pixels."*

An omitted structural cooperative relationship results from the subject matter: *"each pixel has a switching device and a liquid crystal element, and the switching device is connected to a corresponding scan line, a corresponding data line and the liquid crystal element"* (in line 16). It would be unclear to one having ordinary skill in the art which *"switching device"* and which *"liquid crystal element"* the claim is referring to. Are all the *"switching devices"* and *"liquid crystal elements"* so connected? Or is only one pixel's *"switching device"* and *"liquid crystal element"* so connected?

An omitted structural cooperative relationship results from the subject matter: *"continuously receiving"* (in line 9). It would be unclear to one having ordinary skill in the art over what period of time *"continuously receiving"* transpires.

An omitted structural cooperative relationship results from the subject matter: *"a plurality of frame data"* (in line 9) and *"a present frame data"* (in line 13). It would be unclear

to one having ordinary skill in the art whether the "*present frame data*" is one of the earlier claimed "*frame data*"; or rather whether the "*present frame data*" is separate and distinct from the earlier claimed "*frame data*."

An omitted structural cooperative relationship results from the subject matter: "*delaying the frame data*" (in line 10). It would be unclear to one having ordinary skill in the art over what basis "*the frame data*" being "*delayed*" is compared to. "*Delaying*" relative to what?

Transmitting data via a physical wire will inherently introduced a "*delay*" in practice compared to an ideal electrical transmission model. No timeline of events has been claimed, rendering difficult, if not impossible, for an artisan to deduce what constitutes "*delaying the frame data*."

An omitted structural cooperative relationship results from the subject matter: "*a plurality of corresponding delayed frame data*" (in line 10) and "*a corresponding delayed frame data*" (in line 13). It would be unclear to one having ordinary skill in the art whether the "*corresponding delayed frame data*" is one of the earlier claimed "*plurality of corresponding delayed frame data*"; or rather whether the "*corresponding delayed frame data*" is separate and distinct from the earlier claimed "*plurality of corresponding delayed frame data*."

An omitted structural cooperative relationship results from the subject matter: "*the value of which*" (in line 12). It would be unclear to one having ordinary skill in the art what precisely the subject of "*which*" is meant to refer to. The data? The voltage? The pulse?

10. Claim 13 recites the limitations: "*the value*" (in line 12) and "*the present frame period*" (in line 16). There is insufficient antecedent basis for these limitations in the claim.

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11. Claim 14 is indefinite where it specifies "***predetermined table***" (in line 3), since "***predetermined***," according to applicant's definition, merely means "*determined beforehand*."

For example, see *Joseph E. Seagram & Sons, Inc. V. Marzall*, Comr. Pats., 84 USPQ 180 (Court of Appeals, District of Columbia).

12. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "***one pixel***" (in claim 15, line 2); "***a plurality of pixels***" (in claim 13, line 5); and "***the pixel***" (in claim 13, line 16). It would be unclear to one having ordinary skill in the art whether the "***one pixel***" is one of the earlier claimed "***pixels***"; or rather whether the "***one pixel***" is separate and distinct from the earlier claimed "***pixels***."

13. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "***the corresponding scan line***" (in claim 16, line 2); "***a plurality of scan lines***" (in claim 13, line 3); and "***a corresponding scan line***" (in claim 13, line 6). It would be unclear to one having ordinary skill in the art whether the "***corresponding scan line***" is one of the earlier claimed "***scan lines***";

or rather whether the "*corresponding scan line*" is separate and distinct from the earlier claimed "*scan lines*."

14. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "*a plurality of scan lines*" (in line 3) and "*a corresponding scan line*" (in line 6). It would be unclear to one having ordinary skill in the art whether the "*corresponding scan line*" is one of the earlier claimed "*plurality of scan lines*"; or rather whether the "*corresponding scan line*" is separate and distinct from the earlier claimed "*plurality of scan lines*."

An omitted structural cooperative relationship results from the subject matter: "*a plurality of data lines*" (in line 4) and "*a corresponding data line*" (in line 7). It would be unclear to one having ordinary skill in the art whether the "*corresponding data line*" is one of the earlier claimed "*plurality of data lines*"; or rather whether the "*corresponding data line*" is separate and distinct from the earlier claimed "*plurality of data lines*."

An omitted structural cooperative relationship results from the subject matter: "*a plurality of pixels*" (in line 5) and "*the corresponding pixel*" (in line 20). It would be unclear to one having ordinary skill in the art whether the "*corresponding pixel*" is one of the earlier claimed "*plurality of pixels*"; or rather whether the "*corresponding pixel*" is separate and distinct from the earlier claimed "*plurality of pixels*."

An omitted structural cooperative relationship results from the subject matter: "***each pixel includes a switching device and a liquid crystal element, the switching device is connected to a corresponding scan line, a corresponding data line and the liquid crystal element***" (in line 16). It would be unclear to one having ordinary skill in the art which "***switching device***" and which "***liquid crystal element***" the claim is referring to. Are all the "***switching devices***" and "***liquid crystal elements***" so connected? Or is only one pixel's "***switching device***" and "***liquid crystal element***" so connected?

An omitted structural cooperative relationship results from the subject matter: "***a plurality of frame data***" (in line 9) and "***a present frame data***" (in line 17). It would be unclear to one having ordinary skill in the art whether the "***present frame data***" is one of the earlier claimed "***frame data***"; or rather whether the "***present frame data***" is separate and distinct from the earlier claimed "***frame data***."

An omitted structural cooperative relationship results from the subject matter: "***delaying the frame data***" (in line 11). It would be unclear to one having ordinary skill in the art over what basis "***the frame data***" being "***delayed***" is compared to. "***Delaying***" relative to what? Transmitting data via a physical wire will inherently introduced a "***delay***" in practice compared to an ideal electrical transmission model. No timeline of events has been claimed, rendering difficult, if not impossible, for an artisan to deduce what constitutes "***delaying the frame data***."

An omitted structural cooperative relationship results from the subject matter: "***a plurality of corresponding delayed frame data***" (in line 11) and "***a corresponding delayed frame data***" (in line 17). It would be unclear to one having ordinary skill in the art whether the "***corresponding delayed frame data***" is one of the earlier claimed "***plurality of corresponding***

delayed frame data"; or rather whether the *"corresponding delayed frame data"* is separate and distinct from the earlier claimed *"plurality of corresponding delayed frame data."*

An omitted structural cooperative relationship results from the subject matter: *"a double-frequency clock signal"* (in line 13) and *"a double-frequency synchronization signal"* (in line 14). It would be unclear to one having ordinary skill in the art what *"frequency"* in each above instance is being doubled.

An omitted structural cooperative relationship results from the subject matter: *"the value of which"* (in line 16). It would be unclear to one having ordinary skill in the art what precisely the subject of *"which"* is meant to refer to. The data? The voltage? The pulse?

15. Claim 17 recites the limitations: *"double-frequency"* (in lines 13 and 14); *"the value"* (in line 16); and *"the present frame period"* (in line 21). There is insufficient antecedent basis for these limitations in the claim.

16. Claim 18 is indefinite where it specifies *"predetermined table"* (in line 3), since *"predetermined,"* according to applicant's definition, merely means *"determined beforehand."* For example, see *Joseph E. Seagram & Sons, Inc. V. Marzall, Comr. Pats.*, 84 USPQ 180 (Court of Appeals, District of Columbia).

17. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

18. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "*double-frequency*" (in line 2) and "*double-frequency*" (in line 3). It would be unclear to one having ordinary skill in the art what "*frequency*" in each above instance is being doubled.

19. Claim 20 recites the limitations: "*double-frequency*" (in lines 2 and 3). There is insufficient antecedent basis for these limitations in the claim.

20. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "*one pixel*" (in claim 21, line 2); "*a plurality of pixels*" (in claim 17, line 5); and "*the corresponding pixel*" (in claim 17, line 20). It would be unclear to one having ordinary skill in the art whether the "*one pixel*" is one of the earlier claimed "*pixels*"; or rather whether the "*one pixel*" is separate and distinct from the earlier claimed "*pixels*."

21. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the subject matter: "*the corresponding scan line*" (in claim 22, line 2); "*a plurality of scan lines*" (in claim 17, line 3); and "*a corresponding scan line*" (in claim 17, line 6). It would be unclear to one having ordinary skill in the art whether the "*corresponding scan line*" is one of the earlier claimed "*scan lines*"; or rather whether the "*corresponding scan line*" is separate and distinct from the earlier claimed "*scan lines*."

Claim Rejections - 35 USC § 103

22. Claims 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Jinda et al (2002/0044115 A1)* in view of *Ham et al (2004/0119730 A1)*.

Regarding claim 13, Jinda discloses a method for driving a liquid crystal display panel [Fig. 8; 15], the method comprising: continuously receiving a plurality of frame data [Fig. 1; "input image signal"]; delaying the frame data [Fig. 1; via 1-4; wherein the frame memories and arithmetic unit inherently delay image signal transmission to the LCD] to produce a plurality of corresponding delayed frame data [Fig. 4; "data value of previous image signal"]; producing an over-drive data voltage pulse [Fig. 5; 1st "b"], the value of which is decided [Fig. 4; via the illustrated look-up table row-column intersections] by comparing a present frame data [Fig. 4; "data value of current image signal"] with a corresponding delayed frame data [Fig. 4; "data value of previous image signal"] (see Page 3, Paragraphs 36-40), and producing an original data voltage pulse [Fig. 5; 2nd "b"] according to the present frame data; and sequentially providing the over-drive data voltage pulse and the original data voltage pulse to the liquid crystal element

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of the pixel in the present frame period [Fig. 5; "one vertical synchronization interval"] via a data line connected to the pixel (see Page 3, Paragraph 41 - Page 4, Paragraph 47). Jinda does not expressly teach the structural details of the liquid crystal panel.

However, Ham does disclose a liquid crystal display panel [Fig. 5; 57] comprising: a plurality of scan lines [Fig. 5; 56]; a plurality of data lines [Fig. 5; 55]; and a plurality of pixels [Fig. 5; 54], each pixel has a switching device [Fig. 5; TFT] and a liquid crystal element [Fig. 5; pixel electrode], and the switching device is connected to the corresponding scan line, the corresponding data line and the liquid crystal element (see Page 4, Paragraph 53 - Page 5, Paragraph 58).

Jinda and Ham are analogous art, because they are from the shared inventive field of driving liquid crystal display devices via over-drive pulses. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use Ham's liquid crystal display panel in place of Jinda's LCD panel, so as to make use of an active matrix LCD structure suitable for displaying moving images (see Ham: Page 1, Paragraph 5).

Regarding claim 14, Jinda discloses when comparing the present frame data with the corresponding delayed frame data, the value of the over-drive data voltage pulse is decided according to a predetermined table (see Fig. 4; Page 3, Paragraphs 39-40).

Regarding claim 15, Jinda discloses each frame data comprises a plurality of pixel data and each pixel data corresponds to one pixel (see Page 3, Paragraph 38).

Regarding claim 16, Jinda discloses enabling the over-drive data voltage pulse and the original data voltage pulse to be supplied to the liquid crystal element (see Page 4, Paragraph 53 - Page 5, Paragraph 58).

Furthermore, Ham discloses providing a scan voltage to the switching device via the corresponding scan line to enable voltage pulses to be supplied to the liquid crystal element (see Page 4, Paragraph 53 - Page 5, Paragraph 58).

Regarding claim 17, this claim is rejected by the reasoning applied in rejecting claim 1; furthermore, Jinda discloses receiving a clock signal [Fig. 3; "A, B, C,... Y, Z" read operation signals], a synchronization signal [Fig. 5; signal providing "one vertical synchronization interval"], and a plurality of frame data [Fig. 1; "input image signal"]; delaying the frame data [Fig. 1; via 1-4; wherein the frame memories and arithmetic unit inherently delay image signal transmission to the LCD] to produce a plurality of corresponding delayed frame data [Fig. 4; "data value of previous image signal"]; producing a double-frequency clock signal [Fig. 5; "b" applied in the 1st half of "one vertical synchronization interval"] in accordance with the clock

signal, and producing a double-frequency synchronization signal [Fig. 5; "b" applied in the 2nd half of "one vertical synchronization interval"] in accordance with the double-frequency clock signal and the synchronization signal; producing an over-drive data voltage pulse [Fig. 5; 1st "b"], the value of which is decided [Fig. 4; via the illustrated look-up table row-column intersections] by comparing a present frame data [Fig. 4; "data value of current image signal"] with a corresponding delayed frame data [Fig. 4; "data value of previous image signal"] (see Page 3, Paragraphs 36-40), and producing an original data voltage pulse [Fig. 5; 2nd "b"] according to the present frame data (see Page 3, Paragraphs 36-40); and sequentially providing the over-drive data voltage pulse and the original data voltage pulse to the liquid crystal element of the corresponding pixel in accordance with the double-frequency clock signal in the present frame period [Fig. 5; "one vertical synchronization interval"] (see Page 3, Paragraph 41 - Page 4, Paragraph 47). Jinda does not expressly teach the structural details of the liquid crystal panel.

However, Ham does disclose a liquid crystal display panel [Fig. 5; 57] comprising: a plurality of scan lines [Fig. 5; 56]; a plurality of data lines [Fig. 5; 55]; and a plurality of pixels [Fig. 5; 54], each pixel has a switching device [Fig. 5; TFT] and a liquid crystal element [Fig. 5; pixel electrode], and the switching device is connected to the corresponding scan line, the corresponding data line and the liquid crystal element (see Page 4, Paragraph 53 - Page 5, Paragraph 58). Furthermore, Ham discloses providing a clock signal [Fig. 5; MCLK] and a synchronization signal [Fig. 5; H & V] (see Page 4, Paragraph 53 - Page 5, Paragraph 58).

Jinda and Ham are analogous art, because they are from the shared inventive field of driving liquid crystal display devices via over-drive pulses. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to use Ham's liquid crystal

display panel in place of Jinda's LCD panel, so as to make use of an active matrix LCD structure suitable for displaying moving images (see Ham: Page 1, Paragraph 5).

Regarding claim 18, this claim is rejected by the reasoning applied in rejecting claim 3.

Regarding claim 19, Jinda discloses the synchronization signal includes a horizontal synchronization signal [inherent to an LCD matrix display] and a vertical synchronization signal [Fig. 5; "one vertical synchronization interval"] (see Page 3, Paragraph 37).

Furthermore, Ham discloses providing a horizontal synchronization signal [Fig. 5; H] and a vertical synchronization signal [Fig. 5; V] (see Page 4, Paragraph 53 - Page 5, Paragraph 58).

Regarding claim 20, Jinda discloses the double-frequency synchronization signal includes a horizontal double-frequency synchronization signal [inherent to an LCD matrix display] and a vertical double-frequency synchronization signal [Fig. 5; "one vertical synchronization interval"] (see Page 3, Paragraph 37).

Furthermore, Ham discloses providing a horizontal synchronization signal [Fig. 5; H] and a vertical synchronization signal [Fig. 5; V] (see Page 4, Paragraph 53 - Page 5, Paragraph 58).

Regarding claim 21, this claim is rejected by the reasoning applied in rejecting claim 4.

Regarding claim 22, this claim is rejected by the reasoning applied in rejecting claim 5.

Response to Arguments

23. Applicant's arguments filed 9 January 2008 have been fully considered but they are not persuasive.

The Applicant contends:

"First, according to new claim 13 of the present invention, the technical feature 'delaying the frame data to produce a plurality of corresponding delayed frame data' is disclosed in the present invention while it is not taught in Jinda et al.

"Second, the technical feature 'producing an over-drive data voltage pulse, the value of which is decided by comparing a present frame datum with its corresponding delayed frame datum' disclosed in claim 13 of the present invention is also not taught in Jinda et al.

"Third, more particularly, the present invention discloses the detailed way to decide the value of an over-drive data voltage pulse. Referring to Fig.6 and related descriptions in the specification of the present invention (third paragraph in detailed description), an over-drive data value is defined according to the difference between the previous and the current data values and there are three conditions. As shown in Fig.6, when the current data value $G(n+1)$ is larger than the previous data value $G(n)$, the over-drive data value $G(n,n+1)$ is larger than $G(n+1)$. When the current data value $G(n+2)$ is smaller than the previous data value $G(n+1)$, the over-drive data value $G(n+1,n+2)$ is smaller than $G(n+2)$. When the current data value $G(n+3)$ is equal to the previous data value $G(n+2)$, the over-drive data value $G(n+2,n+3)$ is equal to $G(n+3)$. Jinda et al. fail to teach the way of determining an over-drive data value adopted in the present invention" (see Pages 5-6 of the Amendment filed 9 January 2008).

However, the examiner must respectfully disagree. Jinda discloses receiving a plurality of frame data [Fig. 1; "input image signal"]; delaying the frame data [Fig. 1; via 1-4; wherein the frame memories and arithmetic unit inherently delay image signal transmission to the LCD] to produce a plurality of corresponding delayed frame data [Fig. 4; "data value of previous image signal"]; and producing an over-drive data voltage pulse [Fig. 5; 1st "b"], the value of which is decided [Fig. 4; via the illustrated look-up table row-column intersections] by comparing a present frame data [Fig. 4; "data value of current image signal"] with a corresponding delayed frame data [Fig. 4; "data value of previous image signal"] (see Page 3, Paragraphs 36-40).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the detailed way to decide the value of an over-drive data voltage pulse, referring to Fig. 6 and related descriptions in the specification of the present invention*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's arguments with respect to claims 13-22 have been considered but are moot in view of the new ground(s) of rejection.

By such reasoning, rejection of the claims is deemed necessary, proper, and thereby maintained at this time.

Conclusion

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Jeff Piziali/
Primary Examiner, Art Unit 2629
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